



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,432	01/06/2005	Justus Lamprecht	3170	2795
7590	05/30/2006		EXAMINER	
Striker Striker & Stenby 103 East Neck Road Huntington, NY 11743				NGUYEN, TRAN N
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/520,432	LAMPRECHT, JUSTUS	
	<b>Examiner</b> Tran N. Nguyen	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on \_\_\_\_\_.  
2a)  This action is **FINAL**.                            2b)  This action is non-final.  
3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-12 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 06 January 2005 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) •  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) -  
Paper No(s)/Mail Date 0105.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. The disclosure is objected to because of the following:
  - (a) The specification does not provide any detail disclosure and support for the recitation of "*composite structure of the lamination packet that forms the commutator (28) is stabilized by one tubular-stub-like averted feature each on one side of each lamination (32) in the region of the central recess (42), which protrudes into the central recess (42), on the other side of each adjacent lamination (32), and insulating material (34) is located between them*" as in claim 12. There is not detail description in the specification to support the above recitation.

The specification simply states that "[0015] Because the transverse recesses form averted features toward one side of each lamination, the laminations in the annular composite structure form an especially stable structure that is secure against deformation", as in ADVANTAGES OF THE INVENTION section. Detail description support for the claimed language is required.

(b) the specification refers to claim numbers in the detail description for clarifying the disclosure. There should not be any referring to claim, e.g. "[0004] *The present invention having the characteristics of claim 1*" in the ADVANTAGES OF THE INVENTION section. There should not be any referring to claims in the specification.

(c) the specification does not comply with the US patent guideline. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Claim Rejections - 35 USC § 112***

3. **Claims 1-12** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**In claim 1**, the phrase "a commutator (28) that is formed of *disklike annular segments or laminations* (32), characterized in that its laminations (32) have at least one central recess (42, 44, 46) and form a perforated disk" is indefinite because of the following:

- (a) the phrase "*disklike annular segments or laminations*" is alternate claimed language that is unclear.
- (b) the phrase "*laminations (32) have at least one central recess (42, 44, 46) and form a perforated disk*" is unclear whether the laminations formed a perforated disk as the shape of the

commutator as a whole unit or the laminations (32) that is essentially are the so-called “*disklike annular segments*”? The drawings show a cylindrical shaped or a drum shaped commutator, and each commutator bar (32) are not any configuration, form, or shape of the so-called “*disklike annular*”, as in claim 1 recitation.

In light of the spec., the above recitation is understood as “***a commutator (28) that is formed of commutator bar segments (32) or commutator bar laminations (32), characterized in that the commutator bars (32) have at least one central recess (42, 44, 46) and form a perforated section in the commutator (28).***”

In claim 4, “the recess the recess (44, 46) passes in aligned fashion through two diametrically opposed flat sides of the lamination (32)” is indefinite because the term “recess” are used alternately interchanging between the central recess (42) and the two side recesses (44, 46), as recited “the recess (44, 46) is diametrically opposite flat sides”, i.e., these recesses located not at the central portion like recess (42) in the commutator bar. The commutator bar has three types of recesses: (a) the central recess (42); (b) the elongated side recesses (44, 46) each of which passes in aligned fashion through two diametrically opposed flat sides of the lamination; (c) the peripheral edge recesses (48). The applicant is required to clarify the claimed language so that there three types of recesses with referred antecedent basis are clear in the recitation.

Among claims 1-12, the terms “*which*”, “*it*”, “*its*”, “*they*” and “*them*” do not clearly set a reference for the intended referential subject matter or established-antecedent-basis subject matter. The applicant is requested to ensure to establish antecedent basis for all recited subject matter and clearly refer back to the established-antecedent-basis subject matter in the followed dependent claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Brockett** (US 1,539,068) in view of **Gerlach et al** (US 4,562,369).

**Brockett** discloses a power hand-tool employing a motor that has a commutator for the purpose of providing the motor as the driving means that operates the power hand tool. Those skilled in the art would understand that motor is essential part as driving means in power-hand tool, and motor with commutators in power hand tool are well known in the art (see cited refs for support of this statement). However, Brokett does not disclose the motor's commutator as in the claimed invention.

**Gerlach**, however, teaches that a commutator should be designed with the purpose of enhancing the mechanical strength and structural integrity under operating there is no significant tension-related increase in the diameter of the commutator bar segment set, and the weight of the commutator is reduced and the cooling is increased via punch-out recesses in the commutator bars. Gerlach teaches the commutator comprising a plurality of commutator bars, each commutator bar (1) has a central recess (3 fig 3, or 5 fig 5, or 52, 55 fig 9, or 73 fig 10) laminated to formed a tubular-shaped commutator, wherein

Gerlach's fig 3 shows the recess is elongated with closed remaining wall and a continuous opening;

Gerlach's fig 4 shows that the commutator bar (1) also has the recesses (1', 11', 51', 71') passes in aligned fashion through two diametrically opposed flat sides of the commutator bar;

Gerlach's figs 1-14, each shows the commutator bar has two peripheral recesses for the annular armature band (6, 16, 36, 56, 76, 96) that can be prestressed to reach through the recess for provide mechanical support for the attachment of the commutator bars to the commutator drum base; and,

obviously the outer ends of the commutator bar act as a fan and put a flow of cooling air through the commutator bars into motion, since the commutator are rotatably connected to the rotor; thus, during the motor's operation a flow of cooling air is passed through the recesses in the commutator bars, or

in another embodiment (fig 10), Gerlach discloses that commutator bars (71) with a central recess (unnumbered and shown being located between two recesses (73) in fig 10) with a composite structure of the commutator bars packet that forms the commutator is stabilized by compression molding material (77) filled within the recesses and there between the commutator bars to provide mechanical support for stabilizing the structure of the commutator.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the power hand tool's motor with the commutator as taught by Gerlach. Doing so would enhance the efficiency of the power tool via the driving force of the motor with the improved commutator therein.

Regarding the central recess (42) is oval, or the periphery recesses (48) is trapezoidal contour for giving the commutator bar an anvil-shaped contour, would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Gerlach's commutator having commutator bars being configured with the central recess is oval, or the periphery recesses is trapezoidal contour for giving the commutator bar an anvil-shaped contour. Doing so would enhance the mechanical characteristics of the commutator bars. Also, a change

in size or shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955) (emphasis added).

5. **Claims 1-2, 4-5, 7, 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Brockett (US 1,539,068)** in view of individually one of the following:

**GB 453067** (hereafter **GB'067**) or

**Schafer et al (US 2,990,488)** or

**Keistman (US 2,347,056)** or

**Moore (US 1,826,628)**.

**Brockett** discloses a power hand-tool employing a motor that has a commutator for the purpose of providing the motor as the driving means that operates the power hand tool. However, **Brokett** does not discloses the motor's commutator as in the claimed invention.

However, **GB'067** (figs 1-4) or **Schafer** (figs 1-5) or **Kiestman** (fig s1-3) or **Moore** (Figs 1-5), each individual reference teaches that a commutator with cooling improving and weight reducing as well as mechanical supporting by configuring with central and periphery recesses.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the power hand tool's motor with the commutator as taught by one of the above references. Doing so would enhance the efficiency of the power tool via the driving force of the motor with the improved commutator therein.

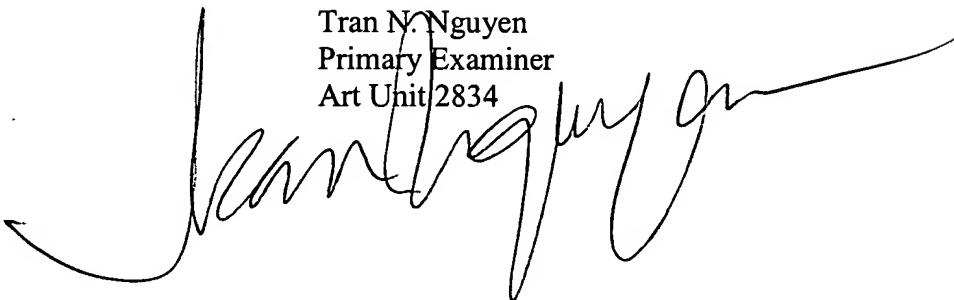
### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tran N. Nguyen  
Primary Examiner  
Art Unit 2834

A handwritten signature in black ink, appearing to read "Tran N. Nguyen", is positioned to the right of the printed name and title. The signature is fluid and cursive, with a long horizontal stroke extending to the right.